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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/963,551	09/27/2001	Hiroki Hachiyama	60188-099	8913

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EXAMINER
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THOMPSON, JAMES A

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/963,551

Applicant(s)

HACHIYAMA ET AL.

Examiner

James A. Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-4 and 6-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-4 and 6-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments, see pages 2-4, filed 27 January 2006, with respect to the rejections of claims 2-4, 6 and 8 under 35 USC §102(b) and claims 7 and 9 under 35 USC §103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn and **prosecution of the application on the merits is re-opened**. However, upon further consideration, new grounds of rejection are made in view of Anderson (US Patent 5,933,137), which was previously cited in the final rejection dated 18 September 2005 and mailed 27 September 2005. Kuchta (US Patent 5,164,831) is also relied upon as a secondary reference for some of the dependent claims. Accordingly, new prior art rejections are given in detail below.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 2, 4 and 6-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Anderson (US Patent 5,933,137).

**Regarding claim 2:** Anderson discloses an image processor (figure 3; figure 4A; and column 3, lines 3-6 of Anderson) comprising an imager (figure 3(114) of Anderson) for capturing an image of an object (column 4, lines 14-19 of Anderson) and outputting image data representing the image captured (column 4,

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lines 18-24 of Anderson); and a compressor/expander (figure 3 (344) and column 4, lines 55-60 of Anderson), which receives and compresses the image data and then outputs the compressed image data (column 5, lines 46-47 and column 8, line 1-11 of Anderson) or which receives and expands the compressed image data and then outputs the expanded image data (column 8, lines 41-46 of Anderson). The received raw image data is compressed in two ways. The first way is in terms of resolution, which produces the thumbnail image (column 8, lines 1-5 of Anderson) representation of the full-sized captured image (column 7, lines 58-64 of Anderson).

Anderson further discloses an image memory (figure 4A(532); column 4, lines 60-62 and column 5, lines 41-45 of Anderson) for storing the compressed image data thereon (column 5, lines 46-49 and column 10, lines 35-40 of Anderson); a display memory (figure 4A(536); column 4, lines 60-62 and column 5, lines 41-45 of Anderson) for storing the expanded image data thereon (column 6, lines 3-11 of Anderson); a display (figure 3(402) of Anderson) for presenting thereon the expanded image data that has been once stored on the display memory (column 5, lines 58-62 of Anderson); and an interface (figure 3(352) and column 5, lines 9-16 of Anderson) for recording the compressed image data, which has been once stored on the image memory, on a storage medium (figure 3(354) and column 10, lines 33-44 of Anderson), wherein image data corresponding to a series of images which are captured consecutively by the imager (column 10, lines 1-12 of Anderson) is transferred from the image memory to the storage medium (column 10, lines 22-30 of Anderson) while the series of images is presented by the display (column 7, lines 51-53 and column 8, lines 6-11 of Anderson). The raw image data and the

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compressed image data transferred from the image memory to the storage device (figure 6(604) and column 10, lines 22-30 of Anderson) are portions of the image data file (figure 6(600) and column 7, lines 51-53 of Anderson) that is created for viewing on the display screen (column 8, lines 6-11 of Anderson).

Furthermore, the RAM memory spooling and image processing and compression (figure 7(620,622,624) of Anderson) are preferably run in parallel with each other and in parallel with other processes (column 10, lines 1-3 of Anderson) so as to move data out of the input buffers as fast as possible to free the input buffers to capture another image (column 10, lines 4-8 of Anderson). Thus, the transfer of image data from the image memory to the storage medium occurs while the image data is displayed on the display.

**Regarding claim 4:** Anderson discloses that the compressor/expander expands the compressed image data (column 8, lines 41-44 of Anderson), representing each of the series of images which is being transferred to the storage medium (column 8, lines 31-36 of Anderson), and then output the expanded image data to the display memory so that each said image being transferred can be presented on the display (column 8, lines 41-50 of Anderson).

**Regarding claim 6:** Anderson discloses that the display presents the series of images (column 8, lines 6-11 of Anderson) while the compressed image data corresponding to the series of images is stored on the storage medium (column 9, lines 44-50 and column 10, lines 33-44 of Anderson).

**Regarding claim 8:** Anderson discloses successively receiving image data corresponding to a series of images captured consecutively by an imager (column 4, lines 14-19 of Anderson); and successively compressing the received image data

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as compressed image data (column 5, lines 46-47 and column 8, line 1-11 of Anderson) by a compressor/expander (figure 3(344) and column 4, lines 55-60 of Anderson). The received raw image data is compressed in two ways. The first way is in terms of resolution, which produces the thumbnail image (column 8, lines 1-5 of Anderson) representation of the full-sized captured image (column 7, lines 58-64 of Anderson).

Anderson further discloses temporarily storing the compressed image data (column 5, lines 46-49 and column 10, lines 35-40 of Anderson) on an image memory (figure 4A(532); column 4, lines 60-62 and column 5, lines 41-45 of Anderson); successively outputting the compressed image data to the compressor/expander (column 8, lines 41-46 of Anderson); successively expanding the compressed image data by the compressor/expander (column 8, lines 41-46 of Anderson); successively storing the image data expanded by the compressor/expander (column 6, lines 3-11 of Anderson) on a display memory (figure 4A(536); column 4, lines 60-62 and column 5, lines 41-45 of Anderson); and storing the compressed image data successively on a storage medium (figure 3(354) and column 10, lines 33-44 of Anderson) while the series of images is presented on a display (column 7, lines 51-53 and column 8, lines 6-11 of Anderson) based on the image data stored on the display memory (column 10, lines 22-30 of Anderson). The raw image data and the compressed image data transferred from the image memory to the storage device (figure 6(604) and column 10, lines 22-30 of Anderson) are portions of the image data file (figure 6(600) and column 7, lines 51-53 of Anderson) that is created for viewing on the display screen (column 8, lines 6-11 of Anderson). Furthermore, the RAM memory spooling and image processing and compression

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(figure 7(620,622,624) of Anderson) are preferably run in parallel with each other and in parallel with other processes (column 10, lines 1-3 of Anderson) so as to move data out of the input buffers as fast as possible to free the input buffers to capture another image (column 10, lines 4-8 of Anderson). Thus, the transfer of image data from the image memory to the storage medium occurs while the image data is displayed on the display.

**Regarding claims 7 and 9:** Anderson discloses that the image memory and the display memory are implemented as a single memory (figure 4a(346,532,536) and column 4, lines 60-62 of Anderson).

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (US Patent 5,933,137) in view of Kuchta (US Patent 5,164,831).

**Regarding claim 3:** Anderson discloses that the compressor/expander produces a reduced-size image for each said image captured and compresses the reduced-size image to obtain and output the compressed image data (column 8, lines 6-11 of Anderson), and wherein the compressor/expander expands the compressed image data (column 8, lines 41-44 of Anderson),

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representing the series of images (column 8, lines 31-34 of Anderson), and then outputs the expanded image data to the display memory so that the reduced-size versions of the series of images can be displayed (column 8, lines 41-46 of Anderson) in the order in which the images have been captured (column 10, lines 3-12 of Anderson).

Anderson does not disclose expressly that said reduced-size versions of the series of images are added one by one on the same display so as to present a plurality of images on the display.

Kuchta discloses expanding compressed image data (column 7, lines 30-34 of Kuchta), representing each of a series of images (column 4, lines 47-50 of Kuchta); and outputting the expanded image data to a display memory so that the reduced-sized versions of the series of images are added one by one on the same display (column 4, line 65 to column 5, line 6 of Kuchta) so as to present a plurality of images on the display (column 7, lines 47-52 of Kuchta).

Anderson and Kuchta are combinable because they are from the same field of endeavor, namely the control, processing and storage of captured digital image data and the creation of reduced-size and/or compressed versions of said captured image data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to display the screen-nail images taught by Anderson in a further reduced-resolution format such that the screen-nail images taught by Anderson are added one by one on the same display so as to present a plurality of images on the display, as taught by Kuchta. The motivation for doing so would have been that using a plurality of thumbnail images improves image selection and downloading



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(column 7, lines 42-45 of Kuchta). Therefore, it would have been obvious to combine Kuchta with Anderson to obtain the invention as specified in claim 3.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Thompson whose telephone number is 571-272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James A. Thompson  
Examiner  
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06 February 2006



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